

RECEIVED
COMMENTS ON RM-9267

Page 1 of 2

May 15, 1998

MAY 22 1998

FCC MAIL ROOM

Office of the Secretary
Federal Communications Commission
Room 222
1919 M Street NW
Washington, DC 20554.

DOCKET FILE COPY ORIGINAL

Comment on file: RM-9267
Original and four (4) copies enclosed

The following are my comments and arguments against the LMCC file RM-9267.

1. Personal Impact

- Licensed amateur radio operator for 22 years.
- I am personally involved with the operation and use of several wide-area inter-tied amateur systems on the 420-450MHz amateur band, one of which has over 20 existing 420-450MHz systems owned and operated by it, and another approximately 35 affiliated systems (i.e.: other systems linked by 420-430MHz links). These systems are located in Southern California, with the affiliated systems being located in California, Nevada, Utah, Arizona, New Mexico and Texas. The system and its affiliates is known as the Cactus Intertie, and has over 800 members in the above states.
- Displacing these and the many other existing 420-450 MHz systems to other bands would have tremendous economic impact (see below.)
- I do not condone this type of action. Should this proposal be accepted I would strongly discourage anyone and everyone from participating in, investing in, contributing to, purchasing or subscribing to any future LMCC-related or member operated equipment or services. The LMCC should not be allowed to cause such economic impact, nor profit from it in any way.

2. Public Service

- Most of the 420-450MHz amateur radio systems in the west are unique in their ability to modularly inter-connect various sections of many states, on-demand, because of the many years of work and the monetary investment in existing 420-450MHz equipment. Forcing the displacement of these systems into other occupied or new bands would involve not only major financial hardship but also significant potential service outages during the transition.
- The 420-450MHz systems I am involved with have been significant contributors to serve the public needs in areas impacted by natural disaster (1989 Loma Prieta Earthquake, landslides, flooding, etc.)
- Where equal or less comparable commercial radio systems (LMCC related) failed during natural disasters, and are otherwise unavailable to assist the general public, amateur radio systems exist and are ready to meet the challenge where it counts - the lives and safety of our citizens. I challenge the LMCC to step up to meet, much less propose to meet those needs, on demand, without ANY cost to the public.

3. Economic Issues Involved in Displacing Current 420-430 MHz and 440-450MHz Systems

- Note that the LMCC is a profit-motivated, revenue-based concern with pre-tax advantages.
- Note that the Amateur Radio community is individually funded out of post-tax dollars.
- A typical 420-450 MHz amateur repeater operation involves the following equipment and approximate costs:
 - \$100-\$2000 or more for commercial-quality radio equipment
 - \$250-\$1200 for band-pass filter protection
 - \$400-\$1200 for suitable transmission-line
 - \$200-\$800 of commercial-quality antenna(s)
 - \$2000-\$3000 for 420-430MHz link equipment (both ends of the link require same equipment)

No. of Copies rec'd

List A B C D E

004
mmB

- Additionally, each user has \$250-\$750 invested in each personal radio to operate in this band and mode, with typically 25 or more users per system (avg. $500 \times 25 = \$12,500$)
- To change these systems to over to a comparable 1200MHz would involve the following replacement costs and equipment (each system):
 - \$2500 for lower-quality radio equipment (provided by one supplier only)
 - \$250-\$1200 for band-pass filter protection
 - \$400-\$800 of commercial-quality antenna(s)
 - \$3000-\$4000 for 1200MHz link equipment on other frequencies (both ends of the link require equipment)
 - Total = \$7200
- Economic loss by rendering existing 420-450MHz equipment useless (as listed in item above) will be approximately \$7200 per system.
- Economic impact on users to purchase new equipment (avg. $500 \times 25 \text{ users} = \$12,500$) plus impact on loss of prior investment (\$12,500)
- The net economic impact per single system/group = $\$7200 + \$7200 + \$12,500 + \$12,500 = \$39,400$
- The net impact for just the Cactus Intertie system (55 systems, with 800 users) = over \$1.5 Million of individual private citizen/taxpayer after-tax money.
- This \$1.5 Million figure is JUST for one large linked 420-450MHz amateur system. I know of at least two more in the California/Nevada area that are nearly as large.
- This also does not take into account the many smaller single systems, with 25-50 users.
- *These costs, to accommodate such a change, would effectively bankrupt the amateur radio community.*
- *Given similar conditions in other highly populated areas, Texas, Illinois, and much of the Eastern Seaboard, the total domestic economic damage the LMCC would be inflicting could easily reach \$500 MILLION dollars.*

4. Under-Estimated Amateur Use of 420-450MHz

- The coordination and reporting of any/all amateur radio spectrum is voluntary, and any reporting is non-standard. Thus, local, state, regional and national/ARRL listings are inadequate as a research tool. The LMCC cannot discount amateur radio use of the spectrum based on existing published information.
- Reporting and awareness of 420-430MHz use is intentionally limited to discourage unauthorized operations and thus maintain our legality. 420-430MHz is used primarily as system control and linking spectrum to maintain our legal obligations. The systems and frequencies used in this band are a significant part of publicly available systems, but are not used directly by the system users, nor are the frequencies occupied published for direct use.

5. LMCC Occupation and Implementation in 420-450MHz Is Impractical

- LMCC has invested in and encouraged shift of operations to higher bands, opening much congestion in 450-512 MHz. It is under-utilizing 470-512. It has not been as successful or effective in it's use of 800-900 MHz allocations.
- The LMCC members profit significantly from the existence of amateur radio resources - with licensed amateur radio operators as their trained engineering personnel, and by using amateur radio bands as test beds for their development. It is counter to their own resources and purposed to pursue this change.
- Current semiconductor, IC and RF technology is focussed on higher frequencies, to facilitate miniaturization and convenience. 420-450MHz does not lend itself to significant miniaturization.
- 420-450 MHz is not suitable for advanced wide-band or digital media. The public would be better served by advanced technologies implemented at 800-900, 1800-1900 or other existing LMCC allocations (re: PCS, GSM, cellular, paging, personal wireless electronics, etc.)

In closing, I heartily recommend against any further consideration of RM-9267.

Respectfully,


David G. Frandh

Amateur Radio Operator: WA6QNW